



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,921	09/10/2001	Hisashi Kuriya	50004888	6328

27123 7590 03/21/2005

MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

EXAMINER

AN, SHAWN S

ART UNIT PAPER NUMBER

2613

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,921

Applicant(s)

KURIYA ET AL.

Examiner

Shawn S An

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 5-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Request for Continued Examination

1. The request filed on 2/22/05 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/856,921 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. As per Applicant's instruction as filed on 2/22/05, claim 1 has been amended.

Response to Remarks

3. Applicants' arguments with respect to amended claim 1 have been carefully considered but are moot in view of the new ground(s) of rejection incorporating the previously cited prior art references.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noriaki (10-271490) in view of Noso (3-99952 A) (JP).

Regarding claim 1, Noriaki discloses an image transformation apparatus, comprising:

a camera (11) mounted on a vehicle for capturing a rear of the vehicle (page 1);
a monitor (25) disposed at a driving seat of the vehicle; and

display control means (15) for transforming an input image captured by the camera at a time vehicle is rolling backward into an output image that is assumed to be an image at a predetermined inclination at a virtual camera position different from an actual camera position, and displaying the output image on the monitor.

Noriaki does not seem to disclose transforming the input image on the basis of the positional relationship between respective pixels of the output image to be displayed on the monitor and respective pixels of the input image corresponding to the output image by obtaining coordinates of input pixels corresponding to each output pixel, and the display control means displaying as each output pixel, the input pixels having the obtained coordinates.

However, Noso teaches surrounding situation monitor for vehicle comprising a display control means (element 7) for transforming the input image on the basis of the positional relationship (relative position) between respective pixels of the output image to be displayed on the monitor (9) and respective pixels of the input image corresponding to the output image (one image) by obtaining coordinates (other coordinates) of input pixels corresponding to each output pixel, and the display control means (7) displaying as each output pixel, the input pixels having the obtained coordinates (by conversion) (see Purpose: and Constitution:).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image transformation apparatus for a vehicle rear monitoring device as taught by Noriaki to incorporate the concepts as above as taught by Noso so as to increase the stability of the display, thereby the driver can easily observe the displayed view with much more accuracy and details as desired.

Regarding claim 2, Noriaki discloses a function of moving a cut range of the output image with respect to the input image in a parallel direction (Drawing 2).

Regarding claim 4, Noriaki discloses transforming the input image into the output image from which lens distortion is removed (page 1).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noriaki and Noso as applied to claim 1 above, and further in view of Choi (5,121,200).

Regarding claim 3, the combination of Noriaki and Noso does not specifically disclose enlarging an output image with respect to the input image and transform it into the output image.

However, Choi teaches enlarging an output image with respect to the input image and transforming it into the output image (Col. 1, lines 66-68; Col. 2, lines 1-5).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image transformation apparatus for a vehicle rear monitoring device as taught by Noriaki to incorporate the concept of enlarging an output image with respect to the input image and transforming it into the output image as taught by Choi so as to increase the stability of the display, thereby the driver can see the displayed view with much more accuracy and details.

7. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noriaki and Noso as applied to claim 1 above, and further in view of Atsushi (11-016097).

Regarding claim 9, the combination of Noriaki and Noso does not specifically disclose displaying a guide display for supporting an operation of a vehicle.

However, Atsushi teaches a guide display (Drawing 13; [0063]) for supporting an operation of a vehicle.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image transformation apparatus for a vehicle rear monitoring device as taught by Noriaki to incorporate the guide display as taught by Atsushi for supporting an operation of a vehicle when the vehicle rolls backward, wherein the guide display is superimposed on the monitor for clear understanding of the display.

Regarding claim 10, Atsushi teaches the guide display being displayed at a predetermined position on a screen of the monitor, and includes a vehicle width guideline showing expected positions of both sides of the vehicle (Drawing 13).

Regarding claim 11, Atsushi teaches a steering angle sensor for detecting a steering angle of a steering wheel, wherein the guide display is displayed with movement on the screen of the monitor, and including a steering path guideline of the vehicle showing an expected position of the vehicle when the vehicle rolls forward at the steering angle of the wheel ([0063], Drawing 13).

Therefore, it would have been obvious to incorporate the concept as above for the vehicle rolling backward.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noriaki, Noso, and Atsushi as applied to claim 9 above, and further in view of JP (01147983A).

Regarding claim 12, Atsushi teaches a steering angle sensor for detecting a steering angle of a steering wheel (Drawing 13).

The combination of Noriaki, Noso, and Atsushi does not specifically disclose the guide display including a steering start guideline that is displayed at a predetermined position on a screen of the monitor and made of line segment for guiding an steering start for parking and a guide mark that is displayed with movement along the steering start guideline in accordance with the size of the steering angle.

However, JP (01147983A) Patent teaches the guide display including a steering start guideline that is displayed at a predetermined position on a screen of the monitor and made of line segment for guiding an steering start for parking and a guide mark that is displayed with movement along the steering start guideline in accordance with the size of the steering angle (Drawings 3 and 4).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image transformation apparatus for a vehicle rear monitoring device as taught by Noriaki to incorporate the concept as taught by JP (01147983A) for supporting an operation of a vehicle when the vehicle rolls backward, and needs to be parked, wherein the guide display is superimposed on the monitor for clear understanding of the display.

Allowable Subject Matter

9. Claims 5-8 are objected to as being dependent upon a rejected base claim 1, but would be allowable: if claim 5 is rewritten in independent form including all of the limitations of the base claim 1 and any intervening claims.

Dependent claims 5-8 recite the novel features, and the art of record fails to anticipate or make obvious the novel features as specified in the dependent claim 5. Accordingly, if the amendments are made to the claims listed above, and if rejected claims are canceled, the application would be placed in condition for allowance.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **Shawn S An** whose telephone number is 571-272-7324. The Examiner can normally be reached on Flex hours (10).

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**SHAWN AN
PRIMARY EXAMINER**

3/16/05